

**Memorandum (March 28, 2017)**

**To:** Stacey Fahrner, Fresenius/NCP

**From:** Caitlin Sheetz and Yaena Min

**Subject:** Technical Approach for the Cardiovascular Procedure Movement Analysis

Fresenius and its partner, NCP, are interested in gaining coverage in the Ambulatory Surgery Centers (ASCs) for certain diagnostic and interventional cardiac procedures. As part of that process, you are interested in understanding the financial impact of procedures moving across different settings. The Moran Company was tasked with modeling the payment differential of these cardiovascular procedures moving from the Hospital Outpatient Department (HOPD) and physician offices to the ASCs. This memo provides detail on technical approach to our modeling. It is accompanied by an Excel spreadsheet model entitled '*Fresenius Cardiovascular Procedure Volume Movement from the HOPD and Physician Office to the ASC, 03.28.18*'.

**One-Year Impact Model**

Using the most recently available claims data and payment rate information, we modeled the one-year impact of 5% of the HOPD and physician office volume of each cardiac procedure moving to the ASC. We then estimated how much the Medicare system would save if the procedures were performed in the ASC instead of the HOPD and physician office.

We used the 2016 data released with the 2018 Final Outpatient Prospective Payment System (OPPS) rule and 2016 Physician Supplier Procedure Summary (PSPS) file to count the units of cardiovascular procedures in the HOPD and the physician office. The cardiovascular procedures included in this analysis were the same three sets of codes analyzed in the prior work we have done for you to evaluate site of service and safety (see Table 2). Payment rates for the HOPD were obtained from the 2018 Final Rule OPPS Addendum B. The non-facility payment rates for the office were calculated using the 2018 Relative Value Units (RVU) file, 'PPRVU18b'. We calculated total payments for each code and group of codes by taking the 2016 volumes multiplied by the 2018 payment rates.

Total payments in the ASC were calculated by multiplying the 5% of volume that moved from the outpatient hospital and physician office to the ASC by the estimated ASC payment rate. We calculated the ASC payment rate by taking 56% of the outpatient hospital payment rate. Two codes, 93282 (Prgrmg eval implantable dfb) and 93284 (Prgrmg eval implantable dfb), had a greater volume in the physician office than the HOPD so we used the office non-facility payment rate instead of the estimated ASC payment rate for the volume that moved to the ASC. Savings were calculated by taking the difference between the payment in the HOPD and office added together minus the reimbursement in the ASC.

### Ten-Year Impact Model

Using the results from the one-year model, we examined the financial impact of the volume moving from the HOPD and physician office to the ASC from 2019 to 2028. The savings over the next ten years were calculated by projecting the volume and payment rates in all three settings. The following assumptions were made to trend out the data.

We wanted to account for increases and decreases in code volume over time. In order to determine a trend for each group of codes, we used the previous four years of available claims data to evaluate volume changes. We projected the volume in the HOPD and physician office by using the volume-weighted average of utilization shown in Table 1.

**Table 1. Volume-Weighted Average of Utilization in Outpatient Hospital and Physician Office**

| Procedure Code | Setting |         |
|----------------|---------|---------|
|                | HOPD    | Office  |
| <b>Group 1</b> | 14.35%  | 1.08%   |
| <b>Group 2</b> | 10.72%  | -10.93% |
| <b>Group 3</b> | -3.13%  | -1.01%  |

Once we had determined the new volume for the subsequent year, we adjusted the payments to reflect the corresponding year's payment rate. We projected the payment rates in all the settings using the update factors from the 2018 Final rules. The ASC, HOPD and non-facility MPFS payment rates were adjusted each year by 1.2%, 1.35%, and 0.41%, respectively.

For the volume movement to ASC, we assumed that 5% of the volume will move from the HOPD and physician office to the ASC in 2019. After 2019, we assumed 2.78% of the volume would move to the ASC which totals to 30% of the HOPD and physician office volume moving over the ten year period.

We totaled the savings in each year and calculated an estimated total savings from 2019-2028 to be around \$900 million. We also break this down to show Medicare savings and beneficiary savings. We estimated beneficiary share with a simple 80/20 split recognizing that in certain instances the beneficiary HOPD payment would be capped at the inpatient deductible and might be less than what we are estimating.

**Table 2. Cardiovascular Procedures Used in the Analysis**

| HCPCS | Group   | Short Descriptor              |
|-------|---------|-------------------------------|
| 0237T | Group 1 | Trluml perip athrc brchiocph  |
| 92920 | Group 1 | Prq cardiac angioplast 1 art  |
| 92921 | Group 1 | Prq cardiac angio addl art    |
| 92924 | Group 1 | Prq card angio/athrect 1 art  |
| 92925 | Group 1 | Prq card angio/athrect addl   |
| 92928 | Group 1 | Prq card stent w/angio 1 vs1  |
| 92929 | Group 1 | Prq card stent w/angio addl   |
| 92937 | Group 1 | Prq revasc byp graft 1 vs1    |
| 92938 | Group 1 | Prq revasc byp graft addl     |
| 92973 | Group 1 | Prq coronary mech thrombect   |
| 93650 | Group 1 | Ablate heart dysrhythm focus  |
| 93653 | Group 1 | Ep & ablate supravent arrhyt  |
| 93654 | Group 1 | Ep & ablate ventric tachy     |
| 93655 | Group 1 | Ablate arrhythmia add on      |
| 93656 | Group 1 | Tx atrial fib pulm vein isol  |
| 93657 | Group 1 | Tx l/r atrial fib addl        |
| C9600 | Group 1 | Perc drug-el cor stent sing   |
| C9601 | Group 1 | Perc drug-el cor stent bran   |
| C9602 | Group 1 | Perc d-e cor stent ather s    |
| C9603 | Group 1 | Perc d-e cor stent ather br   |
| 36221 | Group 2 | Place cath thoracic aorta     |
| 36222 | Group 2 | Place cath carotid/inom art   |
| 36223 | Group 2 | Place cath carotid/inom art   |
| 36224 | Group 2 | Place cath carotd art         |
| 36225 | Group 2 | Place cath subclavian art     |
| 36226 | Group 2 | Place cath vertebral art      |
| 36251 | Group 2 | Ins cath ren art 1st unilat   |
| 36252 | Group 2 | Ins cath ren art 1st bilat    |
| 36253 | Group 2 | Ins cath ren art 2nd+ unilat  |
| 36254 | Group 2 | Ins cath ren art 2nd+ bilat   |
| 93462 | Group 2 | L hrt cath trnsptl puncture   |
| 93463 | Group 2 | Drug admin & hemodynmic meas  |
| 93533 | Group 2 | R & l heart cath congenital   |
| 93563 | Group 2 | Inject congenital card cath   |
| 93564 | Group 2 | Inject hrt congntl art/grft   |
| 93565 | Group 2 | Inject l ventr/atrial angio   |
| 93613 | Group 2 | Electrophys map 3d add-on     |
| 93621 | Group 2 | Electrophysiology evaluation  |
| 93622 | Group 2 | Electrophysiology evaluation  |
| 93623 | Group 2 | Stimulation pacing heart      |
| 93505 | Group 3 | Biopsy of heart lining        |
| 93451 | Group 3 | Right heart cath              |
| 93452 | Group 3 | Left hrt cath w/ventriclgrphy |
| 93453 | Group 3 | R&l hrt cath w/ventriclgrphy  |
| 93454 | Group 3 | Coronary artery angio s&i     |
| 93455 | Group 3 | Coronary art/grft angio s&i   |
| 93456 | Group 3 | R hrt coronary artery angio   |
| 93457 | Group 3 | R hrt art/grft angio          |
| 93458 | Group 3 | L hrt artery/ventricle angio  |
| 93459 | Group 3 | L hrt art/grft angio          |
| 93460 | Group 3 | R&l hrt art/ventricle angio   |
| 93461 | Group 3 | R&l hrt art/ventricle angio   |
| 93530 | Group 3 | Rt heart cath congenital      |
| 93531 | Group 3 | R & l heart cath congenital   |
| 93532 | Group 3 | R & l heart cath congenital   |
| 93603 | Group 3 | Right ventricular recording   |
| 93600 | Group 3 | Bundle of his recording       |
| 93602 | Group 3 | Intra-atrial recording        |
| 93612 | Group 3 | Intraventricular pacing       |
| 93620 | Group 3 | Electrophysiology evaluation  |
| 93624 | Group 3 | Electrophysiologic study      |
| 93282 | Group 3 | Prgrmg eval implantable dfb   |
| 93284 | Group 3 | Prgrmg eval implantable dfb   |
| 92960 | Group 3 | Cardioversion electric ext    |